

type. or species. of its day. The testimony of the rocks informs us. beyond the shadow of a doubt. that at different periods of geological history the fauna and flora of the earth were entirely different: that very few of the species now existing were to be found during periods which, geologically speaking. are not very remote. and that with the progress of cycles the forms of animal and vegetable life have advanced from the very simplest to the complex developments of the present day. It is true that in only a few cases have fossils yielded us the actual links of a chain of evolutionary changes. to show the steps by which a tribe of organisms has altered its form. The fossils of an epoch are a miserably incomplete record of its fauna : what. for instance. could we learn of the bird-life of present-day England by scouring the bed of the Thames ? But, in respect to a few animals. such links are forthcoming. One of the earliest forms of the horse whose fossil bones have been discovered (Orohippus) possessed four toes : fossils that have been disinterred from later deposits show very completely the absorption of the first toe. and the gradual shortening of the second and fourth toes until they only remain as rudimentary splint bones in the horse of our time.

Moreover. there has been a gradual change of habitat. Life. beginning in the sea. has passed on to the land and thence to the air, and animals which for the most part inhabit one of

these elements have shown a tendency to trespass upon the others. Thus amongst mammals—  
which are mainly terrestrial—whales and seals have taken to water, and bats to air : amongst birds, ostriches have become purely terrestrial, penguins and divers almost aquatic: whilst frogs, and other batrachians, pass a portion of their life in water and another portion on land.